

# The Dark Side Of 'Green' Bulbs

## Disposing of Fluorescents, Electronics Releases Toxins; Companies Tout Recycling.

The Wallstreet Journal, By SARA SCHAEFER MUÑOZ  
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As Americans set up their new computers, TVs and other electronic goodies from the holidays, the increasingly eco-minded consumer is wondering: What should I do with the old ones?

Rapidly improving technology and a consumer thirst for all the latest gadgets are leaving people with a growing number of old electronics. Even though they should be recycled, most end up in the trash or gather dust in the basement. Now, states and manufacturers are trying to make it easier for people to recycle old TVs, iPods and even fluorescent light bulbs.

Retailers are seizing on "green" marketing opportunities by launching recycling initiatives. **Best Buy** Co. last year started a program that sponsors local drop-off events around the country, where people can bring in carloads of unused items. In October, Office Depot Inc. began selling recycling "boxes" at \$5 to \$15 that customers fill with office items such as laptops and fax machines to be recycled. (The company says the cost of the box helps fund the program.) Ace Hardware retailers in the Chicago area and Wisconsin last year started programs to recycle mercury-containing compact fluorescent bulbs; **Wal-Mart Stores** Inc. held a pilot take-back day last summer at 350 of its stores. Meanwhile, states are tightening their waste laws: Minnesota, for example, passed a law in 2007 that requires manufacturers of TVs and computers to collect and recycle by weight 60% of what they sold in the previous year.

Computers, televisions and other electronics contain materials such as lead, cadmium and mercury, which can pose a risk to human health and the environment. Energy Star-labeled electronics -- touted as eco-friendly due to the energy they save -- still contain hazardous materials. The mercury in LCD TV screens and the lead in computer monitors, for example, may contaminate soil or water if not handled properly. There's no federal law for the disposal of consumer electronics, though a handful of states have made it illegal to throw them in the trash.

### More People Recycling

According to the Environmental Protection Agency, old consumer electronics accounted for about 1.5% of 250 million tons of trash in 2006, up from 1% in 2000. According to a 2006 report from the International Association of Electronics Recyclers, an industry group based in Albany, N.Y., roughly 15% to 20% of electronic waste was recycled, up from 10% to 15% in 2003. The figures don't include products that were returned to manufacturers for recycling.

Some environmental advocates and researchers warn that many recycled items may end up in landfills anyway, or be recycled improperly in poorer countries.

Nevertheless, more people are interested in recycling. Richard Leventhal, a small-business owner in Wellington, Fla., admits that he has put cellphones, a TV and a computer monitor in the garbage in the past. "I really didn't put a whole lot of thought into it," he says. "But with this attention to the environment, I started to."

He was in Office Depot about two months ago and saw a pamphlet for the office-supply chain's recycling program. He now takes his personal and business electronics in, because "it's easy. I just fill a box and bring it back."

Another product that should be recycled is the fluorescent light bulb. As part of the government's focus on energy and the environment, Americans are urged to buy compact fluorescent light bulbs, which use only about 25% of the energy and last up to 10 times as long as traditional incandescent bulbs. Nearly 300 million such bulbs were sold in U.S. in 2007, compared with 100 million two years earlier, according to the Department of Energy.

### **Avoiding the Landfill**

Yet unlike traditional incandescent bulbs, these bulbs contain mercury, a metal hazardous to human health and the environment. Consumers are urged not to toss them in the trash. In some states, such as California, it's illegal to throw them away; they must be recycled. Still, many cities and towns don't have recycling programs for the bulbs, and consumers aren't sure what to do with them.

"Who's going to read the warnings on a lightbulb package?" asks John Roth, a sales manager in Portland, Ore. He has several bulbs around his house. He plans to call his local recycling program to figure out what to do when they burn out after their average lifespan of five to seven years.

An estimated 25% of all mercury-containing bulbs -- including residential compact fluorescents -- are recycled, according to Paul Abernathy, the executive director of the Association of Lighting and Mercury Recyclers, an industry group in Calistoga, Calif. There are little more than two dozen licensed facilities in the U.S. for processing mercury waste, he says.

"Everywhere we go, we are being encouraged to use [compact fluorescent bulbs], but there's really a lack of reasonably accessible drop-off spots" when they burn out, he says.

### **Mercury Hazard**

The amount of mercury in compact fluorescent bulbs is small, about five milligrams at the most, and is sealed inside the glass tubing, according to the EPA. Manufacturers have been working to lower that amount. As long as people clean up broken bulbs right away

## Safer Disposal

Some companies that are launching or expanding programs for bulbs and electronics:

Company	Program
<b>Office Depot Inc.</b>	People can now buy a \$5, \$10 or \$15 box to fill with old electronics and return to the store for recycling.
<b>Best Buy Co.</b>	Last year it started a program sponsoring electronic drop-off events around the country.
<b>Sony Electronics Inc.</b>	The company has take-back programs at more than 80 points around the country. There are small fees for non-Sony products.
<b>Osram Sylvania</b>	For \$15, consumers can order a recycling kit they can fill with up to 15 compact fluorescent bulbs. They then drop it off, at no additional charge, at FedEx Kinkos or the post office.

and don't let kids touch them, people should be able to prevent contamination in their home, says Ellen Silbergeld, a professor of environmental health sciences at Johns Hopkins University. (The government suggests airing out the room for at least 15 minutes as a precaution.) Yet Ms. Silbergeld says she is more concerned about the environmental impact if millions of these bulbs end up in landfills or incinerators.

"I don't think anybody has really grappled with this," she says.

The Department of Energy, which encourages consumers to purchase the energy-saving bulbs, acknowledges they can be "cumbersome to recycle and dispose of," but says the agency is working to increase the availability of options. The agency also says that coal-fired power plants are the greatest source of environmental mercury -- U.S. power plants emitted 50 tons of mercury in 2006 -- and using compact fluorescent bulbs cuts down on the amount of coal burned to make electricity.

When it comes to computers, many major manufacturers -- such as Apple Inc. and **Dell** Inc. -- will take old computers back. The recycling of TVs, especially large ones, is also onerous. Sony Electronics started a take-back program in September. Until mid-March the company will offer consumers a \$100 credit toward a new Sony TV if they bring in an old one. Consumers can find a list of more than 80 drop-off points at [www.sony.com/recycle](http://www.sony.com/recycle).

If consumers want to know what else to do with their old electronics or fluorescent bulbs, several Web sites can help them find a drop-off place in their area, such as [www.earth911.org](http://www.earth911.org) and [www.epa.gov/bulbrecycling](http://www.epa.gov/bulbrecycling). They can also check with the manufacturer, as well as their local utility and waste-management division.

Yet there is some concern about where the "recycled" items actually end up. According to Barbara Kyle, the national coordinator for the Electronics TakeBack Coalition, a national group based in San Francisco that promotes responsible recycling, roughly 50% to 80%

of electronic waste that goes to recyclers goes on to developing countries, especially China, where it often isn't properly dealt with. There, workers break apart the items to get at the metals and other components that can be resold and are often exposed to toxic substances in the process. (The International Association of Electronics Recyclers says that there are good and bad recycling operations all over the world and that it urges its members to adhere to best industry practices.)

Ms. Kyle suggests that, if possible, consumers recycle their items through the manufacturer because the manufacturer is likely to have responsible practices to protect its reputation. Consumers can also check a database called e-Stewards at [www.ban.org](http://www.ban.org). There, they can search for a local recycling firms that have taken a pledge not to export the waste to developing countries or allow it to end up in landfills or incinerators.

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